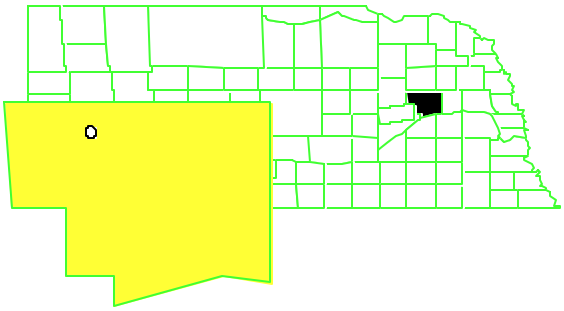
LINDSAY MANUFACTURING CO.

NEBRASKA
EPA ID# NED068645696

EPA Region 7
City: Lindsay
County: Platte County
Other Names:

08/27/2002



SITE DESCRIPTION

The Lindsay Manufacturing Company generated sulfuric acid waste from a galvanizing process at its plant. The wastes were discharged into an unlined pond for 10 years. The pit was closed in 1983, when three monitoring wells showed contamination. The site is surrounded by agricultural land. Approximately 3,000 people live within a 3-mile radius of the site, with the nearest residence located 300 feet away.

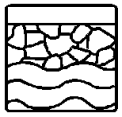
Site Responsibility:

This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date:	10/15/1984
Final Date:	10/04/1989
Deleted Date:	

THREATS AND CONTAMINANTS



On-site ground water contains heavy metals including zinc, iron, cadmium, chromium, and lead from former process wastes. Off-site ground water contains heavy metals including cadmium, zinc, and volatile organic compounds (VOCs). VOCs also have been identified in the perched sand channel in the northern half of the site, in clay soils in the area around the northern quarter of the main plant, and between the main plant and the southern end of the galvanizing building. People could be exposed to contaminants by drinking water from contaminated private wells, by direct contact with contaminated water, by inhaling contaminants released during water use, or by eating food in which contaminants have bioaccumulated.

CLEANUP APPROACH

Response Action Status

Initial Actions: In 1984, Lindsay began operating a ground water extraction and treatment system, whereby the ground water is treated by neutralizing and removing contaminants. A second extraction system was installed in 1989, to control off-site migration of contaminants and increase the radius of influence. Off-site monitoring wells show that the project is controlling the migration of contaminants from the site.

Entire Site: Lindsay began a study of the nature and extent of contamination remaining at the site, as well as the alternative technologies for cleanup. The study was completed in 1990. Based on the results of the study, the EPA selected a remedy that included a pilot study to evaluate the feasibility of vacuum extraction of on-site soils, installation of such a system if it is deemed practical, enhancement and utilization of the existing ground water extraction and treatment systems, installation of additional ground water monitoring wells, installation of an additional extraction well, and continued monitoring of the ground water collection/treatment system during cleanup activities. Lindsay began the technical design for these activities in 1992. In early 1993, a third extraction well became operational to assist in pumping and treating the ground water. The soil vapor extraction (SVE) pilot study was concluded in early 1993. Design of the full-scale system was completed in mid-1994; construction began shortly thereafter and the SVE system became operational in early 1995. In 1996, EPA evaluated the SVE system and determined site specific remediation goals had been attained and verified. Once verified, the SVE system equipment was decommissioned and the site restored. EPA also evaluated the use of irrigation as a means for disposal of the removed ground water. EPA modified the groundwater pumping and is allowing the pumped water to be disposed by irrigation. This reduced the operating costs by approximately $100,000 annually. The EPA completed a 5-year review of the site activities in 1998 and documented modifications to the extraction and treatment system and determined that the remedy remained protective. In 2001, Lindsay proposed to do additional work using an innovative technology to address the residual aquifer contamination. This work was completed in September, 2001. Quarterly ground water monitoring for selected wells continues. EPA and NDEQ continue to evaluate the remedial action yearly to determine the extraction rates for the next year. The next 5-year

review will be in 2003.

Site Facts: In April 1992, a Consent Decree was signed that required the potentially responsible parties to design and implement the remedy and clean up the site under EPA supervision.

ENVIRONMENTAL PROGRESS

All construction at the site is complete. Quarterly ground water results show the reduction in the contaminant levels both on-site and off-site. Use of irrigation as a disposal option allows for the beneficial reuse of the extracted ground water while reducing the overall remediation costs. Verification of the soil vapor extraction cleanup levels was completed. Restoration of the ground water is moving forward. EPA and NDEQ evaluated these actions as part of the five-year review in the fall of 1998, and determined that the remedy is protective and is effective in controlling the plume while reducing the amount of water removed from the aquifer. Crop irrigation supplements the response action during the growing season. Soil gas extraction wells and several ground water monitoring wells have been closed. Several ground water monitoring wells have been closed according to NDOH's title 178 procedures. A treatability study using hydrogen release compound was tested in September, 2001. After a year of ground water monitoring data has been collected and analyzed, the EPA and NDEQ will evaluate the results of this study to determine its effectiveness in cleaning up the ground water.

SITE REPOSITORY

Columbus Public Library,
2504 14th Street
Columbus, NE 68801

Superfund Records Center
901 N. 5th St.
Kansas City, KS 66101
Mail Stop SUPR
(913)551-4038

REGIONAL CONTACTS

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COMMUNITY INVOLVEMENT COORDINATOR:	Beckie Himes
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STATE CONTACT:	Kirk Morrow
PHONE NUMBER:	(402) 471-3388

MISCELLANEOUS INFORMATION

STATE:	NE
	075J
CONGRESSIONAL DISTRICT:	03
EPA ORGANIZATION:	SFD-SUPR/IANE

MODIFICATIONS